FORMAMIDE, WATER, AND THEIR COMPLEXES: A MICROWAVE SPECTROSCOPY STUDY

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The rotational spectra of formamide and water mixtures have been recorded in the 2-8 GHz frequency region using a chirped-pulse Fourier transform microwave spectrometer. Samples of ^{14}N and ^{15}N of formamide have been used in this work. The ^{14}N quadrupole coupling hyperfine structure is a tool to identify the structure of the observed complexes; the ^{15}N isotopologue is of great help to explore the conformational panorama of complexes with several formamide units. In this work we present the detection and characterization of complexes of formamide and formamide-water, as F_3 and F-$(H_2O)_4$, which show interesting structural features.